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13. (Once Amended) The dual mode device as recited in claim 11, wherein the first vector includes components A_x , A_y , and A_z and the second includes components B_x , B_y , and B_z such that the dual mode units generate the cross product by producing cross product components C_x , C_y , and C_z .

15. (Once Amended) The dual mode device as recited in claim 11, wherein the dual mode units are used in a lighting subsystem that is configured to generate a diffuse light value, a specular light value, and a spotlight value.

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16. (Once Amended) The dual mode device as recited in claim 11, wherein each of the dual mode units includes a plurality of multipliers and adders that are arranged to generate the associated cross product component or the dot product.

17. (Once Amended) The dual mode device as recited in claim 16, wherein the dual mode unit uses at least one multiplier and at least one adder to generate the cross product component or the dot product.

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18. (Twice Amended) In computer system having a graphics subsystem comprising a dual mode device, the dual mode device comprising a dual mode controller and a dual mode unit, a method for generating a cross product or a dot product from a first vector and a second vector, the first vector having a first set of components and the second vector having a second set of components, the method comprising:

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- receiving the first and second vectors for generating a cross product component or a dot product at the dual mode controller;
- receiving a first signal indicating whether to generate a cross product component or a dot product at the dual mode controller;
- selecting vector components for evaluating the cross product component or the dot product in response to the first signal;
- sending the selected vector components to the dual mode unit; and
- in response to the first signal and the selected vector components, generating

the cross product component when the first signal indicates generation of the cross product component and generating the dot product when the first signal indicates generation of the dot product.

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